Record Nr. UNISA996464385403316 Autore Groote Jan Friso **Titolo** Tools and Algorithms for the Construction and Analysis of Systems [[electronic resource]]: 27th International Conference, TACAS 2021, Held as Part of the European Joint Conferences on Theory and Practice of Software, ETAPS 2021, Luxembourg City, Luxembourg, March 27 -April 1, 2021, Proceedings, Part I / / edited by Jan Friso Groote, Kim **Guldstrand Larsen** Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2021 3-030-72016-0 **ISBN** Edizione [1st ed. 2021.] Descrizione fisica 1 online resource (483 pages) Theoretical Computer Science and General Issues, , 2512-2029;; Collana 12651 LarsenKim Guldstrand Altri autori (Persone) Disciplina 004.0151 Soggetti Computer science Computer engineering Computer networks Microprogramming Logic programming Theory of Computation Computer Engineering and Networks Control Structures and Microprogramming Logic in Al Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Game Theory -- A Game for Linear-time - Branching-time Nota di contenuto Spectroscopy -- On Satisficing in Quantitative Games --Quasipolynomial Computation of Nested Fixpoints -- SMT Verification -- A Flexible Proof Format for SAT Solver-Elaborator Communication --Generating Extended Resolution Proofs with a BDD-Based SAT Solver --Bounded Model Checking for Hyperproperties -- Counterexample-Guided Prophecy for Model Checking Modulo the Theory of Arrays --

SAT Solving with GPU Accelerated Inprocessing -- FOREST: An Interactive Multi-tree Synthesizer for Regular Expressions --

Probabilities -- Finding Provably Optimal Markov Chains -- Inductive Synthesis for Probabilistic Programs Reaches New Horizons -- Analysis of Markov Jump Processes under Terminal Constraints -- Multiobjective Optimization of Long-run Average and Total Rewards --Inferring Expected Runtimes of Probabilistic Integer Programs Using Expected Sizes -- Probabilistic and Systematic Coverage of Consecutive Test-Method Pairs for Detecting Order-Dependent Flaky Tests --Timed Systems -- Timed Automata Relaxation for Reachability --Iterative Bounded Synthesis for Efficient Cycle Detection in Parametric Timed Automata -- Algebraic Quantitative Semantics for Efficient Online Temporal Monitoring -- Neural Networks -- Synthesizing Context-free Grammars from Recurrent Neural Networks -- Automated and Formal Synthesis of Neural Barrier Certificates for Dynamical Models -- Improving Neural Network Verification through Spurious Region Guided Refinement -- Analysis of Network Communication Resilient Capacity-Aware Routing -- Network Traffic Classification by Program Synthesis. .

Sommario/riassunto

This open access two-volume set constitutes the proceedings of the 27th International Conference on Tools and Algorithms for the Construction and Analysis of Systems, TACAS 2021, which was held during March 27 – April 1, 2021, as part of the European Joint Conferences on Theory and Practice of Software, ETAPS 2021. The conference was planned to take place in Luxembourg and changed to an online format due to the COVID-19 pandemic. The total of 41 full papers presented in the proceedings was carefully reviewed and selected from 141 submissions. The volume also contains 7 tool papers; 6 Tool Demo papers, 9 SV-Comp Competition Papers. The papers are organized in topical sections as follows: Part I: Game Theory; SMT Verification; Probabilities; Timed Systems; Neural Networks; Analysis of Network Communication. Part II: Verification Techniques (not SMT); Case Studies; Proof Generation/Validation; Tool Papers; Tool Demo Papers; SV-Comp Tool Competition Papers.